

Codling Moth, Peach Twig Borer DD Information

August 5, 2005

Codling Moth

Egg hatch and larval emergence for the second generation of codling moth range from 5-85% in northern Utah monitoring sites. Egg hatch (larval emergence from eggs) began at 1100 Degree-Days (DD) and will be 99% completed at 2100 DD. Apples and pears should be protected from second generation codling moth during this period (1100-2100 DD). Below are DD since biofix, % completed egg hatch for 2nd generation, and onset and projected end dates to protect fruit from 2nd generation larvae for each location. Predicted dates are based on an average of 25 DD per day. The second generation will be completed by mid to late August in the warmer locations. August 22 is the photoperiod (day length) deadline to initiate pupation of codling moth larvae and continued development into an adult and initiate a 3rd generation. Beyond August 22, larvae emerging from fruit will spin their cocoons and spend the winter as larvae to await spring of 2006 to pupate and complete development to adults. Sites with predicted initiation of 3rd generation adult emergence (1920 DD = 1% moth emergence) before the August 22 deadline include West Valley City, Salt Lake City, Pleasant View, Perry, Orem, Provo, Kaysville, and Payson. Fruit at the above sites that will be harvested later than the beginning of 3rd generation egg hatch should be protected with an additional insecticide application. See below for predicted dates for the beginning of 3rd generation egg hatch. Sites with predicted onset dates for 3rd generation after August 30 may not have a 3rd generation. An update for prediction of 3rd generation egg hatch will be refined in future advisories. Harvest dates of apples and pears and preharvest intervals of insecticides (required interval between last application and picking fruit) need to be considered when applying late season insecticides.

Peach Twig Borer

Egg hatch of the 2nd generation of peach twig borer is 0-94% completed in monitoring sites in northern Utah. The recommended period to protect peach and nectarine fruits from 2nd generation of peach twig borer (PTB) is 1200-1840 DD. 1200 DD corresponds to 5% egg hatch of the 2nd generation of PTB. A 3rd generation of peach twig borer may occur in some of the warmer sites. Whether or not fruit needs to be protected from the 3rd generation will depend on the projected harvest date, accumulated DD (onset date for egg hatch), and the PTB population in the orchard. Protection from eggs hatching from the 3rd generation should begin at 2140 DD (5% egg hatch). Orchards with good PTB control in the first two generations may have minimal populations and late season control may not be necessary. See below for predicted onset and end dates for 2nd generation, and onset dates for 3rd generation of PTB. Predicted dates are based on an average of 25 DD per day.

2nd and 3rd generation of Peach Twig Borer

<u>Location</u>	<u>DD</u>	<u>% egg hatch (2nd gen.)</u>	<u>Predicted onset and end dates (2nd gen.)</u>	<u>Predicted onset date (3rd gen.)</u>
Perry	1472	53%	Jul 25/Aug 20	Sep 1

Logan(Airport)	973	0%	Aug 13/Sep 7	Sep 19
Kaysville	1418	41%	Jul 26/Aug 22	Sep 2
Salt Lake City	1698	92%	Jul 18/Aug 10	Aug 23
West Valley City	1720	94%	Jul 11/Aug 9	Aug 22
Alpine	1264	11%	Jul 29/Aug 28	Sep 9
Lincoln Point	1296	16%	Jul 29/Aug 27	Sep 7
Orem	1363	28%	Jul 28/Aug 24	Sep 4
Payson	1389	34%	Jul 27/Aug 23	Sep 3
Provo	1331	22%	Jul 29/Aug 25	Sep 6
Pleasant View	1418	41%	Jul 27/Aug 22	Sep 2

Cherry Fruit Fly

Keep cherry fruits protected from fruit flies through harvest. Insecticides with short preharvest intervals include spinosad (GF-120: 0 days; Success or Entrust: 7 days), carbaryl (Sevin: 3 days), imidacloprid ((Provado: 7 days), malathion (1 or 3 days), and permethrin (Pounce and Ambush: 3 days).

Spider Mites

Hot temperatures dramatically increase mite development and reproductive rates. Keep a close watch on fruit trees for build-up of spider mite populations. Also look for fast-moving predaceous mites that can prevent spider mite densities from exceeding economic thresholds (Apples and Stone Fruits: >10 spider mites per leaf if < 1 predator mite per leaf; Pears: > 5 spider mites per leaf if < 1 predator mite per leaf). Mite populations tend to begin in the lower, center portions of trees and then spread to outer leaves. Spider mites can be found in many orchards at this time, but increases in populations have been generally slow. Populations of rust mites that serve as alternative prey for predaceous mites, as well as low to moderate numbers of predaceous mites have been detected in some orchards. If spider mite populations have not exceeded an economic threshold by this point in time, they are less likely to do so. If some mite suppression is needed, consider using a suppressant such as horticultural mineral oil to reduce mite build-up without harming predators.

Precautionary Statement: All pesticides have benefits and risks, however following the label will maximize the benefits and reduce risks. Pay attention to the directions for use and follow precautionary statements. Pesticide labels are considered legal documents containing instructions and limitations. Inconsistent use of the product or disregarding the label is a violation of both federal and state laws. The pesticide applicator is legally responsible for proper use. Any mention of a

pesticide brand in this document is not an endorsement by USU, and brand lists are not all-inclusive.